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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,246	03/24/2005	Gerhard Kelch	LO37-001	8650

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EXAMINER	
ROBERTS, MICHAEL P	

ART UNIT	PAPER NUMBER
2873	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/529,246	KELCH ET AL.	
	Examiner	Art Unit	
	Michael P. Roberts	2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 March 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,9 and 13-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,9 and 13-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 December 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☒ Other: *Examiner's Comment*.

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because the text, "(Figure 4)" is incorrectly placed above line 1 of the abstract. Correction is required. See MPEP § 608.01(b).

Examiner's Comment

2. For applicant's information, the amendments to the claims, filed 3/19/2007, overcome the objections to the claims, the 35 USC 112 rejections to the claims, and the 35 USC 101 rejections to the claims.

3. For applicant's information, newly added claims 20-27 were reviewed for prohibited new matter and support was found within the specification and drawings for the new limitations within these claims.

Claim Objections

4. **Claims 1 and 24** are objected to because of the following informalities: line 2 of each claim recites, "providing spectacle lens" and is grammatically incorrect. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. **Claims 1-5, 9, 17-19, and 24-27** are rejected under 35 U.S.C. 102(e) as being anticipated by Lai '371 (US 6,836,371).

Regarding **claim 1**, Lai '371 discloses a method for producing a lens (title; abstract) comprising: providing spectacle lens to correct aberrations of an eye of an ametropic person (col. 5, lines 61-67), the spectacle lens comprising at least one refracting surface configured to implement, for at least one direction of view, a dioptric correction of the ametropia, wherein the at least one refracting surface comprises a shape (col. 5, lines 61-67; col. 17, lines 20-48); and changing at least a portion of the shape of the at least one refracting surface to correct aberrations of a higher order (col. 17, lines 20-48; col. 3, line 66-col. 4, line 31; col. 5, line 43-col. 6, line 11; col. 16, line 52-col. 17, line 4, wherein the addition of the polymer compositions to the ophthalmic blanks changes the shape of the refractive surface).

Regarding **claim 2**, Lai '371 discloses a method as shown above, and further discloses that a spherical aberration is corrected as an aberration of higher order (col. 17, lines 20-48).

Regarding **claim 3**, Lai '371 discloses a method as shown above, and further discloses that a coma is corrected as an aberration of higher order (col. 17, lines 20-48).

Regarding **claim 4**, Lai '371 discloses a method as shown above, and further discloses that a trefoil aberration is corrected as an aberration of higher order (col. 17, lines 20-48).

Regarding **claim 5**, Lai '371 discloses a method as shown above, and further discloses that values required for correcting said aberrations are determined by measuring visual acuity by implementing the following method: by measuring a wavefront (Fig. 8; col. 17, lines 20-48).

Regarding **claim 9**, Lai '371 discloses a method as shown above, and further discloses that at least 85% of said aberrations of higher order are compensated solely by a correction of central aberrations, comprising at least one of: sphere, cylinder, and axis (col. 17, lines 5-48; col. 19, lines 30-36).

Regarding **claim 17**, Lai '371 discloses a method as shown above, and further discloses that the lens produced by such a method is characterized by designs as a spectacle lens (col. 17, lines 20-48).

Regarding **claim 18**, Lai '371 discloses a method as shown above, and further discloses that the lens produced by such a method is characterized by refractive and/or different structures in the at least one refracting surface, both for dioptric correction of ametropia and for the correction at least of one aberration of higher order for at least one direction of view (col. 6, lines 4-11).

Regarding **claim 19**, Lai '371 discloses a method as shown above, and further discloses that the lens produced by such a method is characterized by materials of glass and/or plastic (col. 1, lines 20-23; col. 5, lines 43-46).

Regarding **claim 24**, Lai '371 discloses a method for producing a lens (title; abstract) comprising: providing spectacle lens to correct aberrations of an eye of an ametropic person (col. 5, lines 61-67), the spectacle lens comprising at least one refracting surface configured to implement, for at least one direction of view, a dioptric correction of the ametropia, wherein the

at least one refracting surface comprises a shape (col. 5, lines 61-67; col. 17, lines 20-48); changing at least a portion of the shape of the at least one refracting surface to correct aberrations of a higher order (col. 17, lines 20-48; col. 3, line 66-col. 4, line 31; col. 5, line 43-col. 6, line 11; col. 16, line 52-col. 17, line 4, wherein the addition of the polymer compositions to the ophthalmic blanks changes the shape of the refractive surface); and wherein at least 50% of said aberrations of higher order are compensated solely by a correction of central aberrations (col. 17, lines 20-48; col. 19, lines 30-36).

Regarding **claim 25**, Lai '371 discloses a method as shown above, and further discloses that the central aberration comprises a sphere (col. 17, lines 20-48).

Regarding **claim 26**, Lai '371 discloses a method as shown above, and further discloses that the central aberration comprises a cylinder (col. 17, lines 20-48).

Regarding **claim 27**, Lai '371 discloses a method as shown above, and further discloses that the central aberration comprises an axis (col. 17, lines 20-48).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. **Claims 6 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lai '371, as applied to independent **claim 1** above, and further in view of Guirao '180 (US 6,511,180).

Regarding **claim 6**, Lai '371 discloses a method for producing a lens as shown above, but does not specifically disclose that said wavefront is measured with a Hartmann-Shack sensor. In the same field of methods for producing a lens, Guirao '180 teaches of a method for making a lens wherein the wavefronts are measured with a Hartmann-Shack sensor (abstract; col. 2, lines 23-25; col. 4, lines 45-48) for the purpose of measuring the higher-order aberrations of the eye quickly, accurately, and repetitively (col. 2, lines 23-25). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made for the method of Lai '371 to have said wavefront measured with a Hartmann-Shack sensor since Guirao '180 teaches of a method for making a lens wherein the wavefronts are measured with a Hartmann-Shack sensor

for the purpose of measuring the higher-order aberrations of the eye quickly, accurately, and repetitively.

Regarding **claim 20**, Lai '371 discloses a method for producing a lens as shown above, and further discloses using a measurement of the eye for the changing of the shape of the at least one refracting surface (col. 17, lines 20-48), but does not specifically disclose measuring a size of a papillary aperture for the eye. In the same field of methods for producing a lens, Guirao '180 teaches of measuring a size of a papillary aperture for the eye, and using the measurement to form a lens (abstract; col. 4, lines 31-33; col. 6, lines 24-43), for the purpose of forming a lens that corrects the aberrations that most affect vision (abstract; col. 6, lines 24-43). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made for the method of Lai '371 to include the step of measuring a size of a papillary aperture for the eye, since Guirao '180 teaches of measuring a size of a papillary aperture for the eye, and using the measurement to form a lens, for the purpose of forming a lens that corrects the aberrations that most affect vision.

11. **Claims 13 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lai '371, as applied to independent **claim 1** above, and further in view of Tagnon '986 (US 3,722,986).

Regarding **claim 13**, Lai '371 discloses a method for producing a lens as shown above, but does not specifically disclose that a region in said lens is corrected for an infinite object distance. In the same field of endeavor of methods for producing a lens, Tagnon '986 teaches of a region in a lens corrected for an infinite object distance (col. 4, lines 11-13) for the purpose of

minimizing aberrations for an infinite distance of vision (col. 14, lines 40-42). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made for the method of Lai '371 to have a region in said lens corrected for an infinite object distance since Tagnon '986 teaches of a region in a lens corrected for an infinite object distance for the purpose of minimizing aberrations for an infinite distance of vision.

Regarding **claim 14**, Lai '371 discloses a method for producing a lens as shown above, but does not specifically disclose that a region in said lens is corrected for a finite object distance. In the same field of endeavor of methods for producing a lens, Tagnon '986 teaches of a region in a lens corrected for a finite object distance (col. 4, lines 11-13) for the purpose of minimizing aberrations for a finite distance of vision (col. 14, lines 43-45). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made for the method of Lai '371 to have a region in said lens corrected for a finite object distance since Tagnon '986 teaches of a region in a lens corrected for a finite object distance for the purpose of minimizing aberrations for a finite distance of vision.

12. **Claims 15 and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lai '371, as applied to independent **claim 1** above, and further in view of Morris '408 (US 6,454,408).

Regarding **claim 15**, Lai '371 discloses a method for producing a lens as shown above, but does not specifically disclose that a transition of a region with highest visual acuity into a region with slightly reduced visual acuity is performed via an edge. In the same field of endeavor of methods for producing a lens, Morris '408 teaches of lenses wherein a transition of a

region with highest visual acuity into a region with slightly reduced visual acuity is performed via an edge (col. 14, lines 20-24, 29-31) for the purpose of providing fashionable prescription visors, shields, or dual lens renditions of similar fashion and style objectives (col. 14, lines 48-51). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made for the method of Lai '371 to include that a transition of a region with highest visual acuity into a region with slightly reduced visual acuity is performed via an edge since Morris '408 teaches of lenses wherein a transition of a region with highest visual acuity into a region with slightly reduced visual acuity is performed via an edge for the purpose of providing fashionable prescription visors, shields, or dual lens renditions of similar fashion and style objectives.

Regarding **claim 16**, Lai '371 discloses a method for producing a lens as shown above, but does not specifically disclose that a transition of a region with highest visual acuity into a region with slightly reduced visual acuity is performed smoothly. In the same field of endeavor of methods for producing a lens, Morris '408 teaches of lenses wherein a transition of a region with highest visual acuity into a region with slightly reduced visual acuity is performed smoothly (col. 14, lines 25-28, 34-36) for the purpose of providing uninterrupted prescription correction (col. 14, lines 45-46). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made for the method of Lai '371 to include that a transition of a region with highest visual acuity into a region with slightly reduced visual acuity is performed smoothly since Morris '408 teaches of lenses wherein a transition of a region with highest visual acuity into a region with slightly reduced visual acuity is performed smoothly for the purpose of providing uninterrupted prescription correction.

13. **Claims 21 and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lai '371, as applied to independent **claim 1** above, and further in view of Perrott '337 (US 2002/0118337).

Regarding **claim 21**, Lai '371 discloses a method for producing a lens as shown above, and further discloses changing the shape of the at least one refracting surface (col. 17, lines 20-48), but does not specifically disclose changing the shape to form an aspheric surface. In the same field of endeavor of ophthalmic lenses, Perrott '337 teaches of a lens with an aspheric surface for the purpose of correcting for off-axis prismatic disparity and partially adjusting for off-axis astigmatic and mean power errors (sec. 0068, 0083-0085). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made for the method of Lai '371 to change the shape to form an aspheric surface since Perrott '337 teaches of a lens with an aspheric surface for the purpose of correcting for off-axis prismatic disparity and partially adjusting for off-axis astigmatic and mean power errors.

Regarding **claim 22**, Lai '371 discloses a method for producing a lens as shown above, and further discloses changing the shape of the at least one refracting surface (col. 17, lines 20-48), but does not specifically disclose changing the shape to form an atoric surface. In the same field of endeavor of ophthalmic lenses, Perrott '337 teaches of a lens with an atoric surface for the purpose of correcting for off-axis prismatic disparity and partially adjusting for off-axis astigmatic and mean power errors (sec. 0068, 0083-0085, 0208). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made for the method of Lai '371 to change the shape to form an atoric surface since Perrott '337 teaches of a lens with

an atoric surface for the purpose of correcting for off-axis prismatic disparity and partially adjusting for off-axis astigmatic and mean power errors.

14. **Claims 23** is rejected under 35 U.S.C. 103(a) as being unpatentable over Lai '371, as applied to independent **claim 1** above, and further in view of Abitbol '412 (US 2002/0196412).

Regarding **claim 23**, Lai '371 discloses a method for producing a lens as shown above, and further discloses changing the shape of the at least one refracting surface (col. 17, lines 20-48), but does not specifically disclose changing the shape to form a free form surface. In the same field of endeavor of ophthalmic lenses, Abitbol '412 teaches of a lens with a free form surface for the purpose of enabling the lens to compensate for higher order aberrations of the eye (sec. 0072-0073). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made for the method of Lai '371 to change the shape to form a free form surface since Abitbol '412 teaches of a lens with a free form surface for the purpose of enabling the lens to compensate for higher order aberrations of the eye.

Response to Arguments

15. Applicant's arguments filed 3/19/2007 have been fully considered but they are not persuasive.

Specifically regarding independent **claim 1** (and therefore **claims 2-6, 9, and 13-23** which are dependent upon independent **claim 1**), applicant argues that Lai '371 does not disclose "changing at least a portion of the shape of the at least one refracting surface," as the amended **claim 1** recites. However, as shown above in Lai '371, depositing and permanently

curing selected amounts of polymer on a refractive substrate indeed does change the shape of the surface of the refractive substrate.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Roberts whose telephone number is (571) 270-1288. The examiner can normally be reached on Monday-Friday 8am-4/5pm with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on (571) 272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MPR

RICKY MACK
SUPERVISORY PATENT EXAMINER